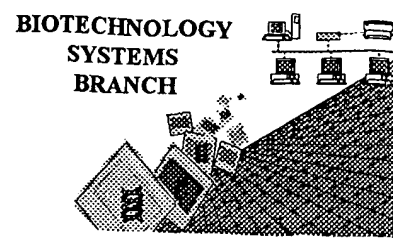


ef



## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/617,217  
Source: OIPK  
Date Processed by STIC: 2/29/2003

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)

2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

3. Hand Carry directly to:

U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202

Or

U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 04/24/2003

# Raw Sequence Listing Error Summary

## ERROR DETECTED

## SUGGESTED CORRECTION

SERIAL NUMBER: 10/6/17,217

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 ☐ Wrapped Nucleics  
Wrapped Aminos      The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 ☐ Invalid Line Length      The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 ☒ Misaligned Amino  
Numbering      The numbering under each 3<sup>rd</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 ☐ Non-ASCII      The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 ☐ Variable Length      Sequence(s) \_\_\_\_\_ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 ☐ PatentIn 2.0  
"bug"      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) \_\_\_\_\_. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 ☐ Skipped Sequences  
(OLD RULES)      Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence:  
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
This sequence is intentionally skipped  
  
Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 ☐ Skipped Sequences  
(NEW RULES)      Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence.  
<210> sequence id number  
<400> sequence id number  
000
- 9 ☐ Use of n's or Xaa's  
(NEW RULES)      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
In <220> to <223> section, please explain location of n or Xaa; and which residue n or Xaa represents.
- 10 ☐ Invalid <213>  
Response      Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 ☐ Use of <220>      Sequence(s) \_\_\_\_\_ missing the <220> "Feature" and associated numeric identifiers and responses.  
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.  
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 ☐ PatentIn 2.0  
"bug"      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 ☐ Misuse of n      n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.



OIPE

## RAW SEQUENCE LISTING

DATE: 07/29/2003

PATENT APPLICATION: US/10/617,217

TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

3 <110> APPLICANT: ASAHI KASEI KABUSHIKI KAISHA  
 5 <120> TITLE OF INVENTION: NF-<sup>1</sup> Activating Gene  
 7 <130> FILE REFERENCE: F101131-US  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/617,217  
 C--> 9 <141> CURRENT FILING DATE: 2003-07-11  
 9 <150> PRIOR APPLICATION NUMBER: JP 2000-402288  
 10 <151> PRIOR FILING DATE: 2000-12-28  
 12 <150> PRIOR APPLICATION NUMBER: JP 2001-088912  
 13 <151> PRIOR FILING DATE: 2001-03-26  
 15 <150> PRIOR APPLICATION NUMBER: JP 2001-254018  
 16 <151> PRIOR FILING DATE: 2001-08-24  
 18 <150> PRIOR APPLICATION NUMBER: US 60/258,315  
 19 <151> PRIOR FILING DATE: 2000-12-28  
 21 <150> PRIOR APPLICATION NUMBER: US 60/278,640  
 22 <151> PRIOR FILING DATE: 2001-03-26  
 24 <150> PRIOR APPLICATION NUMBER: US 60/314,385  
 25 <151> PRIOR FILING DATE: 2001-08-24  
 27 <160> NUMBER OF SEQ ID NOS: 224  
 29 <170> SOFTWARE: PatentIn Ver. 2.0

*pp 1-20*

## ERRORED SEQUENCES

Does Not Comply  
Corrected Diskette Needed

31 <210> SEQ ID NO: 1  
 32 <211> LENGTH: 167  
 33 <212> TYPE: PRT  
 34 <213> ORGANISM: Homo sapiens  
 36 <400> SEQUENCE: 1  
 37 Met Ser Gly Leu Ile Thr Ile Val Val Leu Leu Gly Ile Ala Phe Val  
 E--> 38 1 5 10 15  
 40 Val Tyr Lys Leu Phe Leu Ser Asp Gly Gln Tyr Ser Pro Pro Pro Tyr  
 E--> 41 20 25 30  
 43 Ser Glu Tyr Pro Pro Phe Ser His Arg Tyr Gln Arg Phe Thr Asn Ser  
 E--> 44 35 40 45  
 46 Ala Gly Pro Pro Pro Pro Gly Phe Lys Ser Glu Phe Thr Gly Pro Gln  
 E--> 47 50 55 60  
 49 Asn Thr Gly His Gly Ala Thr Ser Gly Phe Gly Ser Ala Phe Thr Gly  
 E--> 50 65 70 75 80  
 52 Gln Gln Gly Tyr Glu Asn Ser Gly Pro Gly Phe Trp Thr Gly Leu Gly  
 E--> 53 85 90 95  
 55 Thr Gly Gly Ile Leu Gly Tyr Leu Phe Gly Ser Asn Arg Ala Ala Thr  
 E--> 56 100 105 110  
 58 Pro Phe Ser Asp Ser Trp Tyr Tyr Pro Ser Tyr Pro Pro Ser Tyr Pro

*global error (see p. 20)*

## RAW SEQUENCE LISTING

DATE: 07/29/2003

PATENT APPLICATION: US/10/617,217

TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

E--> 59      115              120              125  
 61 Gly Thr Trp Asn Arg Ala Tyr Ser Pro Leu His Gly Gly Ser Gly Ser  
 E--> 62      130              135              140  
 64 Tyr Ser Val Cys Ser Asn Ser Asp Thr Lys Thr Arg Thr Ala Ser Gly  
 E--> 65 145              150              155              160  
 67 Tyr Gly Gly Thr Arg Arg Arg  
 E--> 68      165  
 158 <210> SEQ ID NO: 3  
 159 <211> LENGTH: 339  
 160 <212> TYPE: PRT  
 161 <213> ORGANISM: Homo sapiens  
 163 <400> SEQUENCE: 3  
 164 Met Ala Ala Ala Cys Gly Pro Gly Ala Ala Gly Tyr Cys Leu Leu Leu  
 E--> 165 1              5              10              15  
 167 Gly Leu His Leu Phe Leu Leu Thr Ala Gly Pro Ala Leu Gly Trp Asn  
 E--> 168      20              25              30  
 170 Asp Pro Asp Arg Met Leu Leu Arg Asp Val Lys Ala Leu Thr Leu His  
 E--> 171      35              40              45  
 173 Tyr Asp Arg Tyr Thr Thr Ser Arg Arg Leu Asp Pro Ile Pro Gln Leu  
 E--> 174      50              55              60  
 176 Lys Cys Val Gly Gly Thr Ala Gly Cys Asp Ser Tyr Thr Pro Lys Val  
 E--> 177 65              70              75              80  
 179 Ile Gln Cys Gln Asn Lys Gly Trp Asp Gly Tyr Asp Val Gln Trp Glu  
 E--> 180      85              90              95  
 182 Cys Lys Thr Asp Leu Asp Ile Ala Tyr Lys Phe Gly Lys Thr Val Val  
 E--> 183      100              105              110  
 185 Ser Cys Glu Gly Tyr Glu Ser Ser Glu Asp Gln Tyr Val Leu Arg Gly  
 E--> 186      115              120              125  
 188 Ser Cys Gly Leu Glu Tyr Asn Leu Asp Tyr Thr Glu Leu Gly Leu Gln  
 E--> 189      130              135              140  
 191 Lys Leu Lys Glu Ser Gly Lys Gln His Gly Phe Ala Ser Phe Ser Asp  
 E--> 192 145              150              155              160  
 194 Tyr Tyr Tyr Lys Trp Ser Ser Ala Asp Ser Cys Asn Met Ser Gly Leu  
 E--> 195      165              170              175  
 197 Ile Thr Ile Val Val Leu Leu Gly Ile Ala Phe Val Val Tyr Lys Leu  
 E--> 198      180              185              190  
 200 Phe Leu Ser Asp Gly Gln Tyr Ser Pro Pro Pro Tyr Ser Glu Tyr Pro  
 E--> 201      195              200              205  
 203 Pro Phe Ser His Arg Tyr Gln Arg Phe Thr Asn Ser Ala Gly Pro Pro  
 E--> 204      210              215              220  
 206 Pro Pro Gly Phe Lys Ser Glu Phe Thr Gly Pro Gln Asn Thr Gly His  
 E--> 207 225              230              235              240  
 209 Gly Ala Thr Ser Gly Phe Gly Ser Ala Phe Thr Gly Gln Gln Gly Tyr  
 E--> 210      245              250              255  
 212 Glu Asn Ser Gly Pro Gly Phe Trp Thr Gly Leu Gly Thr Gly Gly Ile  
 E--> 213      260              265              270  
 215 Leu Gly Tyr Leu Phe Gly Ser Asn Arg Ala Ala Thr Pro Phe Ser Asp  
 E--> 216      275              280              285  
 218 Ser Trp Tyr Tyr Pro Ser Tyr Pro Pro Ser Tyr Pro Gly Thr Trp Asn

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## RAW SEQUENCE LISTING

DATE: 07/29/2003

PATENT APPLICATION: US/10/617,217

TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

```

E--> 219   290       295       300
      221 Arg Ala Tyr Ser Pro Leu His Gly Gly Ser Gly Ser Tyr Ser Val Cys
E--> 222 305       310       315       320
      224 Ser Asn Ser Asp Thr Lys Thr Arg Thr Ala Ser Gly Tyr Gly Gly Thr
E--> 225       325       330       335
      227 Arg Arg Arg
      361 <210> SEQ ID NO: 5
      362 <211> LENGTH: 127
      363 <212> TYPE: PRT
      364 <213> ORGANISM: Homo sapiens
      366 <400> SEQUENCE: 5
      367 Met Ala Gly Ala Ile Ile Glu Asn Met Ser Thr Lys Lys Leu Cys Ile
E--> 368 1       5       10       15
      370 Val Gly Gly Ile Leu Leu Val Phe Gln Ile Ile Ala Phe Leu Val Gly
E--> 371       20       25       30
      373 Gly Leu Ile Ala Pro Gly Pro Thr Thr Ala Val Ser Tyr Met Ser Val
E--> 374       35       40       45
      376 Lys Cys Val Asp Ala Arg Lys Asn His His Lys Thr Lys Trp Phe Val
E--> 377       50       55       60
      379 Pro Trp Gly Pro Asn His Cys Asp Lys Ile Arg Asp Ile Glu Glu Ala
E--> 380 65       70       75       80
      382 Ile Pro Arg Glu Ile Glu Ala Asn Asp Ile Val Phe Ser Val His Ile
E--> 383       85       90       95
      385 Pro Leu Pro His Met Glu Met Ser Pro Trp Phe Gln Phe Met Leu Phe
E--> 386       100      105      110
      388 Ile Leu Gln Leu Asp Ile Ala Phe Lys Leu Asn Asn Gln Ile Ser
E--> 389       115      120      125
      449 <210> SEQ ID NO: 7
      450 <211> LENGTH: 233
      451 <212> TYPE: PRT
      452 <213> ORGANISM: Homo sapiens
      454 <400> SEQUENCE: 7
      455 Met Ala Gly Ala Ile Ile Glu Asn Met Ser Thr Lys Lys Leu Cys Ile
E--> 456 1       5       10       15
      458 Val Gly Gly Ile Leu Leu Val Phe Gln Ile Ile Ala Phe Leu Val Gly
E--> 459       20       25       30
      461 Gly Leu Ile Ala Pro Gly Pro Thr Thr Ala Val Ser Tyr Met Ser Val
E--> 462       35       40       45
      464 Lys Cys Val Asp Ala Arg Lys Asn His His Lys Thr Lys Trp Phe Val
E--> 465       50       55       60
      467 Pro Trp Gly Pro Asn His Cys Asp Lys Ile Arg Asp Ile Glu Glu Ala
E--> 468 65       70       75       80
      470 Ile Pro Arg Glu Ile Glu Ala Asn Asp Ile Val Phe Ser Val His Ile
E--> 471       85       90       95
      473 Pro Leu Pro His Met Glu Met Ser Pro Trp Phe Gln Phe Met Leu Phe
E--> 474       100      105      110
      476 Ile Leu Gln Leu Asp Ile Ala Phe Lys Leu Asn Asn Gln Ile Arg Glu
E--> 477       115      120      125
      479 Asn Ala Glu Val Ser Met Asp Val Ser Leu Ala Tyr Arg Asp Asp Ala

```

## RAW SEQUENCE LISTING

DATE: 07/29/2003

PATENT APPLICATION: US/10/617,217

TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

```

E--> 480   130           135           140
      482 Phe Ala Glu Trp Thr Glu Met Ala His Glu Arg Val Pro Arg Lys Leu
E--> 483 145           150           155           160
      485 Lys Cys Thr Phe Thr Ser Pro Lys Thr Pro Glu His Glu Gly Arg Tyr
E--> 486           165           170           175
      488 Tyr Glu Cys Asp Val Leu Pro Tyr Ala Gln His Leu His His Tyr Gly
E--> 489           180           185           190
      491 Val Val Leu Glu Glu Asp His His Asp Val Pro Thr Pro Ser Ala Ser
E--> 492           195           200           205
      494 Gly Lys Ser His Leu Cys Pro Trp Asp Phe His Asp Leu Tyr Gln Tyr
E--> 495           210           215           220
      497 Pro Ser Gly Met Val Phe His Arg Val
E--> 498 225           230
      632 <210> SEQ ID NO: 9
      633 <211> LENGTH: 198
      634 <212> TYPE: PRT
      635 <213> ORGANISM: Homo sapiens
      637 <400> SEQUENCE: 9
      638 Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu Ser
E--> 639   1           5           10           15
      641 Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu Ser Asp
E--> 642           20           25           30
      644 Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile Cys Pro Pro
E--> 645           35           40           45
      647 Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn Ile Ser Gln Lys
E--> 648           50           55           60
      650 Asp Cys Asp Cys Leu His Val Val Glu Pro Met Pro Val Arg Gly Pro
E--> 651           65           70           75           80
      653 Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu Cys Lys Tyr Glu Glu Arg
E--> 654           85           90           95
      656 Ser Ser Val Thr Ile Lys Val Thr Ile Ile Ile Tyr Leu Ser Ile Leu
E--> 657           100          105          110
      659 Gly Leu Leu Leu Leu Tyr Met Val Tyr Leu Thr Leu Val Glu Pro Ile
E--> 660           115          120          125
      662 Leu Lys Arg Arg Leu Phe Gly His Ala Gln Leu Ile Gln Ser Asp Asp
E--> 663           130          135          140
      665 Asp Ile Gly Asp His Gln Pro Phe Ala Asn Ala His Asp Val Leu Ala
E--> 666 145          150          155          160
      668 Arg Ser Arg Ser Arg Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln
E--> 669           165          170          175
      671 Gln Arg Trp Lys Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp
E--> 672           180          185          190
      674 Arg His Val Val Leu Ser
E--> 675           195
      771 <210> SEQ ID NO: 11
      772 <211> LENGTH: 221
      773 <212> TYPE: PRT
      774 <213> ORGANISM: Homo sapiens
      776 <400> SEQUENCE: 11

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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/617,217

DATE: 07/29/2003  
TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt  
Output Set: N:\CRF4\07292003\J617217.raw

777 Met Ala Leu Ala Leu Ala Ala Leu Ala Ala Val Glu Pro Ala Cys Gly  
E--> 778 1 5 10 15  
780 Ser Arg Tyr Gln Gln Leu Gln Asn Glu Glu Glu Ser Gly Glu Pro Glu  
E--> 781 20 25 30  
783 Gln Ala Ala Gly Asp Ala Pro Pro Tyr Ser Ser Ile Ser Ala Glu  
E--> 784 35 40 45  
786 Ser Ala Ala Tyr Phe Asp Tyr Lys Asp Glu Ser Gly Phe Pro Lys Pro  
E--> 787 50 55 60  
789 Pro Ser Tyr Asn Val Ala Thr Thr Leu Pro Ser Tyr Asp Glu Ala Glu  
E--> 790 65 70 75 80  
792 Arg Thr Lys Ala Glu Ala Thr Ile Pro Leu Val Pro Gly Arg Asp Glu  
E--> 793 85 90 95  
795 Asp Phe Val Gly Arg Asp Asp Phe Asp Asp Ala Asp Gln Leu Arg Ile  
E--> 796 100 105 110  
799 Gly Asn Asp Gly Ile Phe Met Leu Thr Phe Phe Met Ala Phe Leu Phe  
E--> 800 115 120 125  
802 Asn Trp Ile Gly Phe Phe Leu Ser Phe Cys Leu Thr Thr Ser Ala Ala  
E--> 803 130 135 140  
805 Gly Arg Tyr Gly Ala Ile Ser Gly Phe Gly Leu Ser Leu Ile Lys Trp  
E--> 806 145 150 155 160  
808 Ile Leu Ile Val Arg Phe Ser Thr Tyr Phe Pro Gly Tyr Phe Asp Gly  
E--> 809 165 170 175  
811 Gln Tyr Trp Leu Trp Trp Val Phe Leu Val Leu Gly Phe Leu Leu Phe  
E--> 812 180 185 190  
814 Leu Arg Gly Phe Ile Asn Tyr Ala Lys Val Arg Lys Met Pro Glu Thr  
E--> 815 195 200 205  
817 Phe Ser Asn Leu Pro Arg Thr Arg Val Leu Phe Ile Tyr  
E--> 818 210 215 220  
930 <210> SEQ ID NO: 13  
931 <211> LENGTH: 242  
932 <212> TYPE: PRT  
933 <213> ORGANISM: Homo sapiens  
935 <400> SEQUENCE: 13  
936 Met Asp His His Gln Pro Gly Thr Gly Arg Tyr Gln Val Leu Leu Asn  
E--> 937 1 5 10 15  
939 Glu Glu Asp Asn Ser Glu Ser Ser Ala Ile Glu Gln Pro Pro Thr Ser  
E--> 940 20 25 30  
942 Asn Pro Ala Pro Gln Ile Val Gln Ala Ala Ser Ser Ala Pro Ala Leu  
E--> 943 35 40 45  
945 Glu Thr Asp Ser Ser Pro Pro Tyr Ser Ser Ile Thr Val Glu Val  
E--> 946 50 55 60  
948 Pro Thr Thr Ser Asp Thr Glu Val Tyr Gly Glu Phe Tyr Pro Val Pro  
E--> 949 65 70 75 80  
951 Pro Pro Tyr Ser Val Ala Thr Ser Leu Pro Thr Tyr Asp Glu Ala Glu  
E--> 952 85 90 95  
954 Lys Ala Lys Ala Ala Ala Met Ala Ala Ala Ala Ala Glu Thr Ser Gln  
E--> 955 100 105 110  
957 Arg Ile Gln Glu Glu Glu Cys Pro Pro Arg Asp Asp Phe Ser Asp Ala  
E--> 958 115 120 125

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## RAW SEQUENCE LISTING

DATE: 07/29/2003

PATENT APPLICATION: US/10/617,217

TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

960 Asp Gln Leu Arg Val Gly Asn Asp Gly Ile Phe Met Leu Ala Phe Phe  
 E--> 961 130 135 140  
 963 Met Ala Phe Ile Phe Asn Trp Leu Gly Phe Cys Leu Ser Phe Cys Ile  
 E--> 964 145 150 155 160  
 966 Thr Asn Thr Ile Ala Gly Arg Tyr Gly Ala Ile Cys Gly Phe Gly Leu  
 E--> 967 165 170 175  
 969 Ser Leu Ile Lys Trp Ile Leu Ile Val Arg Phe Ser Asp Tyr Phe Thr  
 E--> 970 180 185 190  
 972 Gly Tyr Phe Asn Gly Gln Tyr Trp Leu Trp Trp Ile Phe Leu Val Leu  
 E--> 973 195 200 205  
 975 Gly Leu Leu Leu Phe Phe Arg Gly Phe Val Asn Tyr Leu Lys Val Arg  
 E--> 976 210 215 220  
 978 Asn Met Ser Glu Ser Met Ala Ala Ala His Arg Thr Arg Tyr Phe Phe  
 E--> 979 225 230 235 240  
 981 Leu Leu  
 1112 <210> SEQ ID NO: 15  
 1113 <211> LENGTH: 242  
 1114 <212> TYPE: PRT  
 1115 <213> ORGANISM: Homo sapiens  
 1117 <400> SEQUENCE: 15  
 1118 Met Asp His His Gln Pro Gly Thr Gly Arg Tyr Gln Val Leu Leu Asn  
 E--> 1119 1 5 10 15  
 1121 Glu Glu Asp Asn Ser Glu Ser Ser Ala Ile Glu Gln Pro Pro Thr Ser  
 E--> 1122 20 25 30  
 1124 Asn Pro Ala Pro Gln Ile Val Gln Ala Val Ser Ser Ala Pro Ala Leu  
 E--> 1125 35 40 45  
 1127 Glu Thr Asp Ser Ser Pro Pro Tyr Ser Ser Ile Thr Val Glu Val  
 E--> 1128 50 55 60  
 1130 Pro Thr Thr Ser Asp Thr Glu Val Tyr Gly Glu Phe Tyr Pro Val Pro  
 E--> 1131 65 70 75 80  
 1133 Pro Pro Tyr Ser Val Ala Thr Ser Leu Pro Thr Tyr Asp Glu Ala Glu  
 E--> 1134 85 90 95  
 1136 Lys Ala Lys Ala Ala Ala Met Ala Ala Ala Ala Glu Thr Ser Gln  
 E--> 1137 100 105 110  
 1139 Arg Ile Gln Glu Glu Glu Cys Pro Pro Arg Asp Asp Phe Ser Asp Ala  
 E--> 1140 115 120 125  
 1142 Asp Gln Leu Arg Val Gly Asn Asp Gly Ile Phe Met Leu Ala Phe Phe  
 E--> 1143 130 135 140  
 1145 Met Ala Phe Ile Phe Asn Trp Leu Gly Phe Cys Leu Ser Phe Cys Ile  
 E--> 1146 145 150 155 160  
 1148 Thr Asn Thr Ile Ala Gly Arg Tyr Gly Ala Ile Cys Gly Phe Gly Leu  
 E--> 1149 165 170 175  
 1151 Ser Leu Ile Lys Trp Ile Leu Ile Val Arg Phe Ser Asp Tyr Phe Thr  
 E--> 1152 180 185 190  
 1154 Gly Tyr Phe Asn Gly Gln Tyr Trp Leu Trp Trp Ile Phe Leu Val Leu  
 E--> 1155 195 200 205  
 1157 Gly Leu Leu Leu Phe Phe Arg Gly Phe Val Asn Tyr Leu Lys Val Arg  
 E--> 1158 210 215 220  
 1160 Asn Met Ser Glu Ser Met Ala Ala Ala His Arg Thr Arg Tyr Phe Phe

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## RAW SEQUENCE LISTING

DATE: 07/29/2003

PATENT APPLICATION: US/10/617,217

TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

```

E--> 1161 225          230          235          240
      1163 Leu Leu
      1294 <210> SEQ ID NO: 17
      1295 <211> LENGTH: 336
      1296 <212> TYPE: PRT
      1297 <213> ORGANISM: Homo sapiens
      1299 <400> SEQUENCE: 17
      1300 Met Ala Arg Arg Arg Gln Arg Val Cys Ala Ser Gly Pro Ser Met
E--> 1301 1          5          10          15
      1303 Leu Asn Ser Ala Arg Gly Ala Pro Glu Leu Leu Arg Gly Thr Ala Thr
E--> 1304          20          25          30
      1306 Asn Ala Glu Val Ser Ala Ala Ala Gly Ala Thr Gly Ser Glu Glu
E--> 1307          35          40          45
      1309 Leu Pro Pro Gly Asp Arg Gly Cys Arg Asn Gly Gly Gly Arg Gly Pro
E--> 1310          50          55          60
      1312 Ala Ala Thr Thr Ser Ser Thr Gly Val Ala Val Gly Ala Glu His Gly
E--> 1313          65          70          75          80
      1315 Glu Asp Ser Leu Ser Arg Lys Pro Asp Pro Glu Pro Gly Arg Met Asp
E--> 1316          85          90          95
      1318 His His Gln Pro Gly Thr Gly Arg Tyr Gln Val Leu Leu Asn Glu Glu
E--> 1319          100          105          110
      1321 Asp Asn Ser Glu Ser Ser Ala Ile Glu Gln Pro Pro Thr Ser Asn Pro
E--> 1322          115          120          125
      1324 Ala Pro Gln Ile Val Gln Ala Val Ser Ser Ala Pro Ala Leu Glu Thr
E--> 1325          130          135          140
      1327 Asp Ser Ser Pro Pro Pro Tyr Ser Ser Ile Thr Val Glu Val Pro Thr
E--> 1328          145          150          155          160
      1330 Thr Ser Asp Thr Glu Val Tyr Gly Glu Phe Tyr Pro Val Pro Pro Pro
E--> 1331          165          170          175
      1333 Tyr Ser Val Ala Thr Ser Leu Pro Thr Tyr Asp Glu Ala Glu Lys Ala
E--> 1334          180          185          190
      1336 Lys Ala Ala Ala Met Ala Ala Ala Ala Glu Thr Ser Gln Arg Ile
E--> 1337          195          200          205
      1339 Gln Glu Glu Glu Cys Pro Pro Arg Asp Asp Phe Ser Asp Ala Asp Gln
E--> 1340          210          215          220
      1342 Leu Arg Val Gly Asn Asp Gly Ile Phe Met Leu Ala Phe Phe Met Ala
E--> 1343          225          230          235          240
      1345 Phe Ile Phe Asn Trp Leu Gly Phe Cys Leu Ser Phe Cys Ile Thr Asn
E--> 1346          245          250          255
      1348 Thr Ile Ala Gly Arg Tyr Gly Ala Ile Cys Gly Phe Gly Leu Ser Leu
E--> 1349          260          265          270
      1351 Ile Lys Trp Ile Leu Ile Val Arg Phe Ser Asp Tyr Phe Thr Gly Tyr
E--> 1352          275          280          285
      1354 Phe Asn Gly Gln Tyr Trp Leu Trp Trp Ile Phe Leu Val Leu Gly Leu
E--> 1355          290          295          300
      1357 Leu Leu Phe Phe Arg Gly Phe Val Asn Tyr Leu Lys Val Arg Asn Met
E--> 1358          305          310          315          320
      1360 Ser Glu Ser Met Ala Ala Ala His Arg Thr Arg Tyr Phe Phe Leu Leu
E--> 1361          325          330          335

```

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## RAW SEQUENCE LISTING

DATE: 07/29/2003

PATENT APPLICATION: US/10/617,217

TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

```

1517 <210> SEQ ID NO: 19
1518 <211> LENGTH: 336
1519 <212> TYPE: PRT
1520 <213> ORGANISM: Homo sapiens
1522 <400> SEQUENCE: 19
1523 Met Ala Arg Arg Arg Ser Gln Arg Val Cys Ala Ser Gly Pro Ser Met
E--> 1524 1 5 10 15
1526 Leu Asn Ser Ala Arg Gly Ala Pro Glu Leu Leu Arg Gly Thr Ala Thr
E--> 1527 20 25 30
1529 Asn Ala Glu Val Ser Ala Ala Ala Gly Ala Thr Gly Ser Glu Glu
E--> 1530 35 40 45
1532 Leu Pro Pro Gly Asp Arg Gly Cys Arg Asn Gly Gly Gly Arg Gly Pro
E--> 1533 50 55 60
1535 Ala Ala Thr Thr Ser Ser Thr Gly Val Ala Val Gly Ala Glu His Gly
E--> 1536 65 70 75 80
1538 Glu Asp Ser Leu Ser Arg Lys Pro Asp Pro Glu Pro Gly Arg Met Asp
E--> 1539 85 90 95
1541 His His Gln Pro Gly Thr Gly Arg Tyr Gln Val Leu Leu Asn Glu Glu
E--> 1542 100 105 110
1544 Asp Asn Ser Glu Ser Ser Ala Ile Glu Gln Pro Pro Thr Ser Asn Pro
E--> 1545 115 120 125
1547 Ala Pro Gln Ile Val Gln Ala Ala Ser Ser Ala Pro Ala Leu Glu Thr
E--> 1548 130 135 140
1550 Asp Ser Ser Pro Pro Pro Tyr Ser Ser Ile Thr Val Glu Val Pro Thr
E--> 1551 145 150 155 160
1553 Thr Ser Asp Thr Glu Val Tyr Gly Glu Phe Tyr Pro Val Pro Pro Pro
E--> 1554 165 170 175
1556 Tyr Ser Val Ala Thr Ser Leu Pro Thr Tyr Asp Glu Ala Glu Lys Ala
E--> 1557 180 185 190
1559 Lys Ala Ala Ala Met Ala Ala Ala Ala Glu Thr Ser Gln Arg Ile
E--> 1560 195 200 205
1562 Gln Glu Glu Glu Cys Pro Pro Arg Asp Asp Phe Ser Asp Ala Asp Gln
E--> 1563 210 215 220
1565 Leu Arg Val Gly Asn Asp Gly Ile Phe Met Leu Ala Phe Phe Met Ala
E--> 1566 225 230 235 240
1568 Phe Ile Phe Asn Trp Leu Gly Phe Cys Leu Ser Phe Cys Ile Thr Asn
E--> 1569 245 250 255
1571 Thr Ile Ala Gly Arg Tyr Gly Ala Ile Cys Gly Phe Gly Leu Ser Leu
E--> 1572 260 265 270
1574 Ile Lys Trp Ile Leu Ile Val Arg Phe Ser Asp Tyr Phe Thr Gly Tyr
E--> 1575 275 280 285
1577 Phe Asn Gly Gln Tyr Trp Leu Trp Trp Ile Phe Leu Val Leu Gly Leu
E--> 1578 290 295 300
1580 Leu Leu Phe Phe Arg Gly Phe Val Asn Tyr Leu Lys Val Arg Asn Met
E--> 1581 305 310 315 320
1583 Ser Glu Ser Met Ala Ala Ala His Arg Thr Arg Tyr Phe Phe Leu Leu
E--> 1584 325 330 335
1740 <210> SEQ ID NO: 21
1741 <211> LENGTH: 76

```

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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/617,217

DATE: 07/29/2003  
TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt  
Output Set: N:\CRF4\07292003\J617217.raw

```

1742 <212> TYPE: PRT
1743 <213> ORGANISM: Homo sapiens
1745 <400> SEQUENCE: 21
1746 Met Val Cys Ile Pro Cys Ile Val Ile Pro Val Leu Leu Trp Ile Tyr
E--> 1747 1 5 10 15
1749 Lys Lys Phe Leu Glu Pro Tyr Ile Tyr Pro Leu Val Ser Pro Phe Val
E--> 1750 20 25 30
1752 Ser Arg Ile Trp Pro Lys Lys Ala Ile Gln Glu Ser Asn Asp Thr Asn
E--> 1753 35 40 45
1755 Lys Gly Lys Val Asn Phe Lys Gly Ala Asp Met Asn Gly Leu Pro Thr
E--> 1756 50 55 60
1758 Lys Gly Pro Thr Glu Ile Cys Asp Lys Lys Lys Asp
E--> 1759 65 70 75
1825 <210> SEQ ID NO: 23
1826 <211> LENGTH: 84
1827 <212> TYPE: PRT
1828 <213> ORGANISM: Homo sapiens
1830 <400> SEQUENCE: 23
1831 Met Ala Ile Lys Phe Leu Glu Val Ile Lys Pro Phe Cys Val Ile Leu
E--> 1832 1 5 10 15
1834 Pro Glu Ile Gln Lys Pro Glu Arg Lys Ile Gln Phe Lys Glu Lys Val
E--> 1835 20 25 30
1837 Leu Trp Thr Ala Ile Thr Leu Phe Ile Phe Leu Val Cys Cys Gln Ile
E--> 1838 35 40 45
1840 Pro Leu Phe Gly Ile Met Ser Ser Asp Ser Ala Asp Pro Phe Tyr Trp
E--> 1841 50 55 60
1843 Met Arg Val Ile Leu Ala Ser Asn Arg Gly Thr Leu Met Glu His Ser
E--> 1844 65 70 75 80
1846 Leu Ser Gly Leu
1929 <210> SEQ ID NO: 25
1930 <211> LENGTH: 179
1931 <212> TYPE: PRT
1932 <213> ORGANISM: Homo sapiens
1934 <400> SEQUENCE: 25
1935 Met Ala Ile Lys Phe Leu Glu Val Ile Lys Pro Phe Cys Val Ile Leu
E--> 1936 1 5 10 15
1938 Pro Glu Ile Gln Lys Pro Glu Arg Lys Ile Gln Phe Lys Glu Lys Val
E--> 1939 20 25 30
1941 Leu Trp Thr Ala Ile Thr Leu Phe Ile Phe Leu Val Cys Cys Gln Ile
E--> 1942 35 40 45
1944 Pro Leu Phe Gly Ile Met Ser Ser Asp Ser Ala Asp Pro Val His Ala
E--> 1945 50 55 60
1947 Val Val Tyr Ile Val Phe Met Leu Gly Ser Cys Ala Phe Phe Ser Lys
E--> 1948 65 70 75 80
1950 Thr Trp Ile Glu Val Ser Gly Ser Ser Ala Lys Asp Val Ala Lys Gln
E--> 1951 85 90 95
1953 Leu Lys Glu Gln Gln Met Val Met Arg Gly His Arg Glu Thr Ser Met
E--> 1954 100 105 110
1956 Val His Glu Leu Asn Arg Tyr Ile Pro Thr Ala Ala Ala Phe Gly Gly

```

p. 20

p. 20

p. 20

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/617,217

DATE: 07/29/2003

TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

```

E--> 1957      115      120      125
      1959 Leu Cys Ile Gly Ala Leu Ser Val Leu Ala Asp Phe Leu Gly Ala Ile
E--> 1960      130      135      140
      1962 Gly Ser Gly Thr Gly Ile Leu Leu Ala Val Thr Ile Ile Tyr Gln Tyr
E--> 1963 145      150      155      160
      1965 Phe Glu Ile Phe Val Lys Glu Gln Ser Glu Val Gly Ser Met Gly Ala
E--> 1966      165      170      175
      1968 Leu Leu Phe
      2074 <210> SEQ ID NO: 27
      2075 <211> LENGTH: 279
      2076 <212> TYPE: PRT
      2077 <213> ORGANISM: Homo sapiens
      2079 <400> SEQUENCE: 27
      2080 Met Glu Ala Val Val Asn Leu Tyr Gln Glu Val Met Lys His Ala Asp
E--> 2081 1      5      10      15
      2083 Pro Arg Ile Gln Gly Tyr Pro Leu Met Gly Ser Pro Leu Leu Met Thr
E--> 2084      20      25      30
      2086 Ser Ile Leu Leu Thr Tyr Val Tyr Phe Val Leu Ser Leu Gly Pro Arg
E--> 2087      35      40      45
      2089 Ile Met Ala Asn Arg Lys Pro Phe Gln Leu Arg Gly Phe Met Ile Val
E--> 2090      50      55      60
      2092 Tyr Asn Phe Ser Leu Val Ala Leu Ser Leu Tyr Ile Val Tyr Glu Phe
E--> 2093 65      70      75      80
      2095 Leu Met Ser Gly Trp Leu Ser Thr Tyr Thr Trp Arg Cys Asp Pro Val
E--> 2096      85      90      95
      2098 Asp Tyr Ser Asn Ser Pro Glu Ala Leu Arg Met Val Arg Val Ala Trp
E--> 2099      100      105      110
      2101 Leu Phe Leu Phe Ser Lys Phe Ile Glu Leu Met Asp Thr Val Ile Phe
E--> 2102      115      120      125
      2104 Ile Leu Arg Lys Lys Asp Gly Gln Val Thr Phe Leu His Val Phe His
E--> 2105      130      135      140
      2107 His Ser Val Leu Pro Trp Ser Trp Trp Trp Gly Val Lys Ile Ala Pro
E--> 2108 145      150      155      160
      2110 Gly Gly Met Gly Ser Phe His Ala Met Ile Asn Ser Ser Val His Val
E--> 2111      165      170      175
      2113 Ile Met Tyr Leu Tyr Tyr Gly Leu Ser Ala Phe Gly Pro Val Ala Gln
E--> 2114      180      185      190
      2116 Pro Tyr Leu Trp Trp Lys Lys His Met Thr Ala Ile Gln Leu Ile Gln
E--> 2117      195      200      205
      2119 Phe Val Leu Val Ser Leu His Ile Ser Gln Tyr Tyr Phe Met Ser Ser
E--> 2120      210      215      220
      2122 Cys Asn Tyr Gln Tyr Pro Val Ile Ile His Leu Ile Trp Met Tyr Gly
E--> 2123 225      230      235      240
      2125 Thr Ile Phe Phe Met Leu Phe Ser Asn Phe Trp Tyr His Ser Tyr Thr
E--> 2126      245      250      255
      2128 Lys Gly Lys Arg Leu Pro Arg Ala Leu Gln Gln Asn Gly Ala Pro Gly
E--> 2129      260      265      270
      2131 Ile Ala Lys Val Lys Ala Asn
E--> 2132      275

```

p. 20

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/617,217

DATE: 07/29/2003

TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

2240 <210> SEQ ID NO: 29  
2241 <211> LENGTH: 137  
2242 <212> TYPE: PRT  
2243 <213> ORGANISM: Homo sapiens  
2245 <400> SEQUENCE: 29  
2246 Met Gly Phe Gly Ala Thr Leu Ala Val Gly Leu Thr Ile Phe Val Leu  
E--> 2247 1 5 10 15  
2249 Ser Val Val Thr Ile Ile Ile Cys Phe Thr Cys Ser Cys Cys Cys Leu  
E--> 2250 20 25 30  
2252 Tyr Lys Thr Cys Arg Arg Pro Arg Pro Val Val Thr Thr Thr Thr Ser  
E--> 2253 35 40 45  
2255 Thr Thr Val Val His Ala Pro Tyr Pro Gln Pro Pro Ser Val Pro Pro  
E--> 2256 50 55 60  
2258 Ser Tyr Pro Gly Pro Ser Tyr Gln Gly Tyr His Thr Met Pro Pro Gln  
E--> 2259 65 70 75 80  
2261 Pro Gly Met Pro Ala Ala Pro Tyr Pro Met Gln Tyr Pro Pro Pro Tyr  
E--> 2262 85 90 95  
2264 Pro Ala Gln Pro Met Gly Pro Pro Ala Tyr His Glu Thr Leu Ala Gly  
E--> 2265 100 105 110  
2267 Gly Ala Ala Ala Pro Tyr Pro Ala Ser Gln Pro Pro Tyr Asn Pro Ala  
E--> 2268 115 120 125  
2270 Tyr Met Asp Ala Pro Lys Ala Ala Leu  
E--> 2271 130 135  
2367 <210> SEQ ID NO: 31  
2368 <211> LENGTH: 118  
2369 <212> TYPE: PRT  
2370 <213> ORGANISM: Homo sapiens  
2372 <400> SEQUENCE: 31  
2373 Met Gly Phe Gly Ala Thr Leu Ala Val Gly Leu Thr Ile Phe Val Leu  
E--> 2374 1 5 10 15  
2376 Ser Val Val Thr Ile Ile Ile Cys Phe Thr Cys Ser Cys Cys Cys Leu  
E--> 2377 20 25 30  
2379 Tyr Lys Thr Cys Arg Arg Pro Arg Pro Val Val Thr Thr Thr Thr Ser  
E--> 2380 35 40 45  
2382 Thr Thr Val Val His Ala Pro Tyr Pro Gln Pro Pro Ser Val Pro Pro  
E--> 2383 50 55 60  
2385 Ser Tyr Pro Gly Pro Ser Tyr Gln Gly Tyr His Thr Met Pro Pro Gln  
E--> 2386 65 70 75 80  
2388 Pro Gly Met Pro Ala Ala Pro Tyr Pro Met Gln Tyr Pro Pro Pro Tyr  
E--> 2389 85 90 95  
2391 Pro Ala Gln Pro Met Gly Pro Pro Ala Tyr His Glu Thr Leu Ala Gly  
E--> 2392 100 105 110  
2394 Glu Cys Pro Cys Gln Leu  
E--> 2395 115  
2493 <210> SEQ ID NO: 33  
2494 <211> LENGTH: 168  
2495 <212> TYPE: PRT  
2496 <213> ORGANISM: Homo sapiens  
2498 <400> SEQUENCE: 33

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/10/617,217

DATE: 07/29/2003  
 TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

2499 Met Asn Ser Lys Gly Gln Tyr Pro Thr Gln Pro Thr Tyr Pro Val Gln  
 E--> 2500 1 5 10 15  
 2502 Pro Pro Gly Asn Pro Val Tyr Pro Gln Thr Leu His Leu Pro Gln Ala  
 E--> 2503 20 25 30  
 2505 Pro Pro Tyr Thr Asp Ala Pro Pro Ala Tyr Ser Glu Leu Tyr Arg Pro  
 E--> 2506 35 40 45  
 2508 Ser Phe Val His Pro Gly Ala Ala Thr Val Pro Thr Met Ser Ala Ala  
 E--> 2509 50 55 60  
 2511 Phe Pro Gly Ala Ser Leu Tyr Leu Pro Met Ala Gln Ser Val Ala Val  
 E--> 2512 65 70 75 80  
 2514 Gly Pro Leu Gly Ser Thr Ile Pro Met Ala Tyr Tyr Pro Val Gly Pro  
 E--> 2515 85 90 95  
 2517 Ile Tyr Pro Pro Gly Ser Thr Val Leu Val Glu Gly Gly Tyr Asp Ala  
 E--> 2518 100 105 110  
 2520 Gly Ala Arg Phe Gly Ala Gly Ala Thr Ala Gly Asn Ile Pro Pro Pro  
 E--> 2521 115 120 125  
 2523 Pro Pro Gly Cys Pro Pro Asn Ala Ala Gln Leu Ala Val Met Gln Gly  
 E--> 2524 130 135 140  
 2526 Ala Asn Val Leu Val Thr Gln Arg Lys Gly Asn Phe Phe Met Gly Gly  
 E--> 2527 145 150 155 160  
 2529 Ser Asp Gly Gly Tyr Thr Ile Trp  
 E--> 2530 165  
 2634 <210> SEQ ID NO: 35  
 2635 <211> LENGTH: 455  
 2636 <212> TYPE: PRT  
 2637 <213> ORGANISM: Homo sapiens  
 2639 <400> SEQUENCE: 35  
 2640 Met Ser Phe Leu Ile Asp Ser Ser Ile Met Ile Thr Ser Gln Ile Leu  
 E--> 2641 1 5 10 15  
 2643 Phe Phe Gly Phe Gly Trp Leu Phe Phe Met Arg Gln Leu Phe Lys Asp  
 E--> 2644 20 25 30  
 2646 Tyr Glu Ile Arg Gln Tyr Val Val Gln Val Ile Phe Ser Val Thr Phe  
 E--> 2647 35 40 45  
 2649 Ala Phe Ser Cys Thr Met Phe Glu Leu Ile Ile Phe Glu Ile Leu Gly  
 E--> 2650 50 55 60  
 2652 Val Leu Asn Ser Ser Ser Arg Tyr Phe His Trp Lys Met Asn Leu Cys  
 E--> 2653 65 70 75 80  
 2655 Val Ile Leu Leu Ile Leu Val Phe Met Val Pro Phe Tyr Ile Gly Tyr  
 E--> 2656 85 90 95  
 2658 Phe Ile Val Ser Asn Ile Arg Leu Leu His Lys Gln Arg Leu Leu Phe  
 E--> 2659 100 105 110  
 2661 Ser Cys Leu Leu Trp Leu Thr Phe Met Tyr Phe Phe Trp Lys Leu Gly  
 E--> 2662 115 120 125  
 2664 Asp Pro Phe Pro Ile Leu Ser Pro Lys His Gly Ile Leu Ser Ile Glu  
 E--> 2665 130 135 140  
 2667 Gln Leu Ile Ser Arg Val Gly Val Ile Gly Val Thr Leu Met Ala Leu  
 E--> 2668 145 150 155 160  
 2670 Leu Ser Gly Phe Gly Ala Val Asn Cys Pro Tyr Thr Tyr Met Ser Tyr  
 E--> 2671 165 170 175

P. 20

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RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/10/617,217

DATE: 07/29/2003  
 TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt  
 Output Set: N:\CRF4\07292003\J617217.raw

```

2673 Phe Leu Arg Asn Val Thr Asp Thr Asp Ile Leu Ala Leu Glu Arg Arg
E--> 2674      180      185      190
2676 Leu Leu Gln Thr Met Asp Met Ile Ile Ser Lys Lys Lys Arg Met Ala
E--> 2677      195      200      205
2679 Met Ala Arg Arg Thr Met Phe Gln Lys Gly Glu Val His Asn Lys Pro
E--> 2680      210      215      220
2682 Ser Gly Phe Trp Gly Met Ile Lys Ser Val Thr Thr Ser Ala Ser Gly
E--> 2683 225      230      235      240
2685 Ser Glu Asn Leu Thr Leu Ile Gln Gln Glu Val Asp Ala Leu Glu Glu
E--> 2686      245      250      255
2688 Leu Ser Arg Gln Leu Phe Leu Glu Thr Ala Asp Leu Tyr Ala Thr Lys
E--> 2689      260      265      270
2691 Glu Arg Ile Glu Tyr Ser Lys Thr Phe Lys Gly Lys Tyr Phe Asn Phe
E--> 2692      275      280      285
2694 Leu Gly Tyr Phe Phe Ser Ile Tyr Cys Val Trp Lys Ile Phe Met Ala
E--> 2695      290      295      300
2697 Thr Ile Asn Ile Val Phe Asp Arg Val Gly Lys Thr Asp Pro Val Thr
E--> 2698 305      310      315      320
2700 Arg Gly Ile Glu Ile Thr Val Asn Tyr Leu Gly Ile Gln Phe Asp Val
E--> 2701      325      330      335
2703 Lys Phe Trp Ser Gln His Ile Ser Phe Ile Leu Val Gly Ile Ile Ile
E--> 2704      340      345      350
2706 Val Thr Ser Ile Arg Gly Leu Leu Ile Thr Leu Thr Lys Phe Phe Tyr
E--> 2707      355      360      365
2709 Ala Ile Ser Ser Ser Lys Ser Ser Asn Val Ile Val Leu Leu Leu Ala
E--> 2710      370      375      380
2712 Gln Ile Met Gly Met Tyr Phe Val Ser Ser Val Leu Leu Ile Arg Met
E--> 2713 385      390      395      400
2715 Ser Met Pro Leu Glu Tyr Arg Thr Ile Ile Thr Glu Val Leu Gly Glu
E--> 2716      405      410      415
2718 Leu Gln Phe Asn Phe Tyr His Arg Trp Phe Asp Val Ile Phe Leu Val
E--> 2719      420      425      430
2721 Ser Ala Leu Ser Ser Ile Leu Phe Leu Tyr Leu Ala His Lys Gln Ala
E--> 2722      435      440      445
2724 Pro Glu Lys Gln Met Ala Pro
E--> 2725      450      455
2876 <210> SEQ ID NO: 37
2877 <211> LENGTH: 322
2878 <212> TYPE: PRT
2879 <213> ORGANISM: Homo sapiens
2881 <400> SEQUENCE: 37
2882 Met Ser Ser Leu Gly Gly Ser Gln Asp Ala Gly Gly Ser Ser Ser
E--> 2883 1      5      10      15
2885 Ser Ser Thr Asn Gly Ser Gly Gly Ser Gly Ser Ser Gly Pro Lys Ala
E--> 2886      20      25      30
2888 Gly Ala Ala Asp Lys Ser Ala Val Val Ala Ala Ala Pro Ala Ser
E--> 2889      35      40      45
2891 Val Ala Asp Asp Thr Pro Pro Pro Glu Arg Arg Asn Lys Ser Gly Ile
E--> 2892      50      55      60

```

## RAW SEQUENCE LISTING

DATE: 07/29/2003

PATENT APPLICATION: US/10/617,217

TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

```

      2894 Ile Ser Glu Pro Leu Asn Lys Ser Leu Arg Arg Ser Arg Pro Leu Ser
E--> 2895   65           70           75           80
      2897 His Tyr Ser Ser Phe Gly Ser Ser Gly Gly Ser Gly Gly Gly Ser Met
E--> 2898           85           90           95
      2900 Met Gly Gly Glu Ser Ala Asp Lys Ala Thr Ala Ala Ala Ala Ala Ala
E--> 2901           100          105          110
      2903 Ser Leu Leu Ala Asn Gly His Asp Leu Ala Ala Ala Met Ala Val Asp
E--> 2904           115          120          125
      2906 Lys Ser Asn Pro Thr Ser Lys His Lys Ser Gly Ala Val Ala Ser Leu
E--> 2907           130          135          140
      2909 Leu Ser Lys Ala Glu Arg Ala Thr Glu Leu Ala Ala Glu Gly Gln Leu
E--> 2910          145          150          155          160
      2912 Thr Leu Gln Gln Phe Ala Gln Ser Thr Glu Met Leu Lys Arg Val Val
E--> 2913           165          170          175
      2915 Gln Glu His Leu Pro Leu Met Ser Glu Ala Gly Ala Gly Leu Pro Asp
E--> 2916           180          185          190
      2918 Met Glu Ala Val Ala Gly Ala Glu Ala Leu Asn Gly Gln Ser Asp Phe
E--> 2919           195          200          205
      2921 Pro Tyr Leu Gly Ala Phe Pro Ile Asn Pro Gly Leu Phe Ile Met Thr
E--> 2922          210          215          220
      2924 Pro Ala Gly Val Phe Leu Ala Glu Ser Ala Leu His Met Ala Gly Leu
E--> 2925          225          230          235          240
      2927 Ala Glu Tyr Pro Met Gln Gly Glu Leu Ala Ser Ala Ile Ser Ser Gly
E--> 2928          245          250          255
      2930 Lys Lys Lys Arg Lys Arg Cys Gly Met Cys Ala Pro Cys Arg Arg Arg
E--> 2931          260          265          270
      2933 Ile Asn Cys Glu Gln Cys Ser Ser Cys Arg Asn Arg Lys Thr Gly His
E--> 2934          275          280          285
      2936 Gln Ile Cys Lys Phe Arg Lys Cys Glu Glu Leu Lys Lys Lys Pro Ser
E--> 2937          290          295          300
      2939 Ala Ala Leu Glu Lys Val Met Leu Pro Thr Gly Ala Ala Phe Arg Trp
E--> 2940          305          310          315          320
      2942 Phe Gln
      3057 <210> SEQ ID NO: 39
      3058 <211> LENGTH: 313
      3059 <212> TYPE: PRT
      3060 <213> ORGANISM: Homo sapiens
      3062 <400> SEQUENCE: 39
      3063 Met Ala Gly Gln Pro Gly His Met Pro His Gly Gly Ser Ser Asn Asn
E--> 3064   1           5           10          15
      3066 Leu Cys His Thr Leu Gly Pro Val His Pro Pro Asp Pro Gln Arg His
E--> 3067          20          25          30
      3069 Pro Asn Thr Leu Ser Phe Arg Cys Ser Leu Ala Asp Phe Gln Ile Glu
E--> 3070          35          40          45
      3072 Lys Lys Ile Gly Arg Gly Gln Phe Ser Glu Val Tyr Lys Ala Thr Cys
E--> 3073          50          55          60
      3075 Leu Leu Asp Arg Lys Thr Val Ala Leu Lys Lys Val Gln Ile Phe Glu
E--> 3076          65          70          75          80
      3078 Met Met Asp Ala Lys Ala Arg Gln Asp Cys Val Lys Glu Ile Gly Leu

```



## RAW SEQUENCE LISTING

DATE: 07/29/2003

PATENT APPLICATION: US/10/617,217

TIME: 08:04:29

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

```

E--> 3079      85      90      95
      3081 Leu Lys Gln Leu Asn His Pro Asn Ile Ile Lys Tyr Leu Asp Ser Phe
E--> 3082      100     105     110
      3084 Ile Glu Asp Asn Glu Leu Asn Ile Val Leu Glu Leu Ala Asp Ala Gly
E--> 3085      115     120     125
      3087 Asp Leu Ser Gln Met Ile Lys Tyr Phe Lys Lys Gln Lys Arg Leu Ile
E--> 3088      130     135     140
      3090 Pro Glu Arg Thr Val Trp Lys Tyr Phe Val Gln Leu Cys Ser Ala Val
E--> 3091 145     150     155     160
      3093 Glu His Met His Ser Arg Arg Val Met His Arg Asp Ile Lys Pro Ala
E--> 3094      165     170     175
      3096 Asn Val Phe Ile Thr Ala Thr Gly Val Val Lys Leu Gly Asp Leu Gly
E--> 3097      180     185     190
      3099 Leu Gly Arg Phe Phe Ser Ser Glu Thr Thr Ala Ala His Ser Leu Val
E--> 3100      195     200     205
      3102 Gly Thr Pro Tyr Tyr Met Ser Pro Glu Arg Ile His Glu Asn Gly Tyr
E--> 3103 210     215     220
      3105 Asn Phe Lys Ser Asp Ile Trp Ser Leu Gly Cys Leu Leu Tyr Glu Met
E--> 3106 225     230     235     240
      3108 Ala Ala Leu Gln Ser Pro Phe Tyr Gly Asp Lys Met Asn Leu Phe Ser
E--> 3109      245     250     255
      3111 Leu Cys Gln Lys Ile Glu Gln Cys Asp Tyr Pro Pro Leu Pro Gly Glu
E--> 3112      260     265     270
      3114 His Tyr Ser Glu Lys Leu Arg Glu Leu Val Ser Met Cys Ile Cys Pro
E--> 3115      275     280     285
      3117 Asp Pro His Gln Arg Pro Asp Ile Gly Tyr Val His Gln Val Ala Lys
E--> 3118 290     295     300
      3120 Gln Met His Ile Trp Met Ser Ser Thr
E--> 3121 305     310
      21694 <210> SEQ ID NO: 213
      21695 <211> LENGTH: 21
      21696 <212> TYPE: RNA
      21697 <213> ORGANISM: Artificial Sequence
      21699 <220> FEATURE:
      21700 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic
      21701 double stranded nucleic acid
      21703 <400> SEQUENCE: 213
E--> 21704 guccaggaua ucaugaguc 19
      21707 <210> SEQ ID NO: 214
      21708 <211> LENGTH: 21
      21709 <212> TYPE: RNA
      21710 <213> ORGANISM: Artificial Sequence
      21712 <220> FEATURE:
      21713 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic
      21714 double stranded nucleic acid
      21716 <400> SEQUENCE: 214
E--> 21717 gacucaugau auccuggac 19
      21720 <210> SEQ ID NO: 215
      21721 <211> LENGTH: 21

```

*19 shown below*

*19*

*19*

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/617,217

DATE: 07/29/2003

TIME: 08:04:30

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

```

21722 <212> TYPE: RNA
21723 <213> ORGANISM: Artificial Sequence
21725 <220> FEATURE:
21726 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic
21727     double stranded nucleic acid
21729 <400> SEQUENCE: 215
E--> 21730 gaagucugaa gaucuaucc 19
21733 <210> SEQ ID NO: 216
21734 <211> LENGTH: 21 19
21735 <212> TYPE: RNA
21736 <213> ORGANISM: Artificial Sequence
21738 <220> FEATURE:
21739 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic
21740     double stranded nucleic acid
21742 <400> SEQUENCE: 216
E--> 21743 ggauagaucu ucagacuuc 19
21746 <210> SEQ ID NO: 217
21747 <211> LENGTH: 21 19
21748 <212> TYPE: RNA
21749 <213> ORGANISM: Artificial Sequence
21751 <220> FEATURE:
21752 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic
21753     double stranded nucleic acid
21755 <400> SEQUENCE: 217
E--> 21756 gcugaagaag agguguucc 19
21759 <210> SEQ ID NO: 218
21760 <211> LENGTH: 21 19
21761 <212> TYPE: RNA
21762 <213> ORGANISM: Artificial Sequence
21764 <220> FEATURE:
21765 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic
21766     double stranded nucleic acid
21768 <400> SEQUENCE: 218
E--> 21769 ggaacaccuc uucuucagc 19
21772 <210> SEQ ID NO: 219
21773 <211> LENGTH: 21 19
21774 <212> TYPE: RNA
21775 <213> ORGANISM: Artificial Sequence
21777 <220> FEATURE:
21778 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic
21779     double stranded nucleic acid
21781 <400> SEQUENCE: 219
E--> 21782 gaugacacag augaagccc 19
21785 <210> SEQ ID NO: 220
21786 <211> LENGTH: 21 19
21787 <212> TYPE: RNA
21788 <213> ORGANISM: Artificial Sequence
21790 <220> FEATURE:
21791 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/617,217

DATE: 07/29/2003

TIME: 08:04:30

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

21792 double stranded nucleic acid  
 21794 <400> SEQUENCE: 220  
 E--> 21795 **gggcucauc ugugucauc** 19  
 21798 <210> SEQ ID NO: 221  
 21799 <211> LENGTH: (21) 19  
 21800 <212> TYPE: RNA  
 21801 <213> ORGANISM: Artificial Sequence  
 21803 <220> FEATURE:  
 21804 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic  
 21805 double stranded nucleic acid  
 21807 <400> SEQUENCE: 221  
 E--> 21808 **gccucagag uccagaau** 19  
 21811 <210> SEQ ID NO: 222  
 21812 <211> LENGTH: (21) 19  
 21813 <212> TYPE: RNA  
 21814 <213> ORGANISM: Artificial Sequence  
 21816 <220> FEATURE:  
 21817 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic  
 21818 double stranded nucleic acid  
 21820 <400> SEQUENCE: 222  
 E--> 21821 **gaucuggac ucugagggc** 19  
 21824 <210> SEQ ID NO: 223  
 21825 <211> LENGTH: (21) 19  
 21826 <212> TYPE: RNA  
 21827 <213> ORGANISM: Artificial Sequence  
 21829 <220> FEATURE:  
 21830 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic  
 21831 double stranded nucleic acid  
 21833 <400> SEQUENCE: 223  
 E--> 21834 **gaugacuuug gaaucuaac** 19  
 21837 <210> SEQ ID NO: 224  
 21838 <211> LENGTH: (21) 19  
 21839 <212> TYPE: RNA  
 21840 <213> ORGANISM: Artificial Sequence  
 21842 <220> FEATURE:  
 21843 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic  
 21844 double stranded nucleic acid  
 21846 <400> SEQUENCE: 224  
 21847 **guuugauacc aaagucauc** 19  
 E--> 21850 (1/754)

delete

see pp 18-20 for more errors

☐A☐B☐C☐D☐E☐F☐G☐H☐I☐J☐K☐L☐M☐N☐O

Delete them. They are invalid

<120> NF-~~YEB~~ Activating Gene

<150> JP 2000-402288

<151> 2000-12-28

<150> JP 2001-088912

<151> 2001-03-26

<150> JP 2001-254018

<151> 2001-08-24

<150> US 60/258,315

<151> 2000-12-28

<150> US 60/278,640

<151> 2001-03-26

<150> US 60/314,385

<151> 2001-08-24

<160> 224□@□@□@□@□@□@□@□@□@□@□@□@

delete

→ do not use foreign accent marks or

scientific symbols

They do not  
process correctly  
in CRF software.

10/6/17, 217 19

Pro Phe Ser Asp Ser Trp Tyr Tyr Pro Ser Tyr Pro Pro Ser Tyr Pro  
115 120 125

Gly Thr Trp Asn Arg Ala Tyr Ser Pro Leu His Gly Gly Ser Gly Ser  
130 135 140

Tyr Ser Val Cys Ser Asn Ser Asp Thr Lys Thr Arg Thr Ala Ser Gly  
145 150 155 160

Tyr Gly Gly Thr Arg Arg  
165

<210> 2  
<211> 1472  
<212> DNA  
<213> Homo sapiens

<220>  
<221> CDS  
<222> (194)..(694)

(sample of  
global errors)

Delete  
these  
globally

<400> 2  
aaaaactgtg gtgagctgtg aaggctatga gtcctctgaa gaccagtatg tactaagagg 60

ttcttgtggc ttggagtata atttagatta tacagaactt ggctgcaga aactgaagga 120

gtctggaaag cagcacggct ttgctcttt ctctgattat tattataagt ggtcctcggc 180

ggattcctgt aac atg agt gga ttg att acc atc gtg gta ctc ctt gg 229

Met Ser Gly Leu Ile Thr Ile Val Val Leu Leu Gly  
1 5 10

atc gcc ttt gta gtc tat aag ctg ttc ctg agt gac ggg cag tat tct 277

Ile Ala Phe Val Val Tyr Lys Leu Phe Leu Ser Asp Gly Gln Tyr Ser  
15 20 25

cct cca ccg tac tct gag tat cct cca ttt tcc cac cgt tac cag aga 325

Pro Pro Pro Tyr Ser Glu Tyr Pro Pro Phe Ser His Arg Tyr Gln Arg  
30 35 40

ttc acc aac tca gca gga cct cct ccc cca ggc ttt aag tct gag ttc 373

Phe Thr Asn Ser Ala Gly Pro Pro Pro Gly Phe Lys Ser Glu Phe  
45 50 55 60

aca gga cca cag aat act ggc cat ggt gca act tct ggt ttt ggc agt 421

Thr Gly Pro Gln Asn Thr Gly His Gly Ala Thr Ser Gly Phe Gly Ser  
65 70 75

gct ttt aca gga caa caa gga tat gaa aat tca gga cca ggg ttc tgg 469

Ala Phe Thr Gly Gln Gln Gly Tyr Glu Asn Ser Gly Pro Gly Phe Trp  
80 85 90

aca ggc ttg gga act ggt gga ata cta gga tat ttg ttt ggc agc aat 517

Thr Gly Leu Gly Thr Gly Gly Ile Leu Gly Tyr Leu Phe Gly Ser Asn  
95 100 105

Please  
ensure  
all amino  
acids listed  
in coding  
sequences  
are  
valid

10/6/17, 217 20

<210> 1  
<211> 167  
<212> PRT  
<213> Homo sapiens

<400> 1

Met Ser Gly Leu Ile Thr Ile Val Val Leu Leu Gly Ile Ala Phe Val

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400

Delete - also, see item 3 on Error  
summary sheet

**VERIFICATION SUMMARY**PATENT APPLICATION: **US/10/617,217**

DATE: 07/29/2003

TIME: 08:04:31

Input Set : **N:\FANTU\10617217.txt**Output Set: **N:\CRF4\07292003\J617217.raw**

L:9 M:270 C: Current Application Number differs, Replaced Current Application No  
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:38 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1  
M:332 Repeated in SeqNo=1  
L:89 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:93 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:97 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:101 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:105 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:109 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:113 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:117 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:121 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:125 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:129 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:165 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3  
M:332 Repeated in SeqNo=3  
L:249 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:253 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:257 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:261 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:265 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:269 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:273 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:277 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:281 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:285 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:289 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:293 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:297 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:301 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:305 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:309 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:313 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:317 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:321 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:325 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:329 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:334 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4  
L:368 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:5  
M:332 Repeated in SeqNo=5  
L:414 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6  
L:418 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6  
L:422 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6  
L:426 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6  
L:430 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6  
L:434 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6  
L:438 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/617,217

DATE: 07/29/2003

TIME: 08:04:31

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

L:442 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6  
L:456 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:7  
M:332 Repeated in SeqNo=7  
L:523 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:8  
L:527 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:8  
L:531 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:8  
L:535 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:8  
L:539 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:8  
L:543 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:8  
L:547 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:8  
L:551 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:8  
L:555 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:8  
L:639 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:9  
M:332 Repeated in SeqNo=9  
L:778 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:11  
M:332 Repeated in SeqNo=11  
L:937 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:13  
M:332 Repeated in SeqNo=13  
L:1119 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:15  
M:332 Repeated in SeqNo=15  
L:1301 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:17  
M:332 Repeated in SeqNo=17  
L:1524 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:19  
M:332 Repeated in SeqNo=19  
L:1747 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:21  
M:332 Repeated in SeqNo=21  
L:1832 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:23  
M:332 Repeated in SeqNo=23  
L:1936 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:25  
M:332 Repeated in SeqNo=25  
L:2081 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:27  
M:332 Repeated in SeqNo=27  
L:2247 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:29  
M:332 Repeated in SeqNo=29  
L:2374 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:31  
M:332 Repeated in SeqNo=31  
L:2500 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:33  
M:332 Repeated in SeqNo=33  
L:2641 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:35  
M:332 Repeated in SeqNo=35  
L:2883 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:37  
M:332 Repeated in SeqNo=37  
L:3064 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:39  
M:332 Repeated in SeqNo=39  
L:3245 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:41  
M:332 Repeated in SeqNo=41  
L:3453 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:43  
M:332 Repeated in SeqNo=43  
L:3688 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:45



**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/617,217

DATE: 07/29/2003

TIME: 08:04:31

Input Set : N:\FANTU\10617217.txt

Output Set: N:\CRF4\07292003\J617217.raw

M:332 Repeated in SeqNo=45

L:3924 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:47

M:332 Repeated in SeqNo=47

L:4093 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:49

M:332 Repeated in SeqNo=49

L:11111 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1

L:11112 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1

L:21704 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:19 SEQ:213

L:21717 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:19 SEQ:214

L:21730 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:19 SEQ:215

L:21743 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:19 SEQ:216

L:21756 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:19 SEQ:217

L:21769 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:19 SEQ:218

L:21782 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:19 SEQ:219

L:21795 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:19 SEQ:220

L:21808 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:19 SEQ:221

L:21821 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:19 SEQ:222

L:21834 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:19 SEQ:223

L:21850 M:254 E: No. of Bases conflict, LENGTH:Input:754 Counted:20 SEQ:224

L:21850 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:2

L:21850 M:252 E: No. of Seq. differs, &lt;211&gt; LENGTH:Input:21 Found:20 SEQ:224